

**WEST**

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L2: Entry 2 of 7

File: DWPI

Nov 7, 1990

DERWENT-ACC-NO: 1991-308259  
DERWENT-WEEK: 199142  
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TITLE: Feldspar prodn. from aluminosilicate(s) - comprises treatment with acidic culture of aspergillus niger, rhizopus arrhizus or penicillium chrysogenum, with storing and heating

INVENTOR: AVAKYAN, Z A; KARAVAIKO, G I ; KORENEVSKI, A A

PATENT-ASSIGNEE:

ASSIGNEE

CODE

AS MICROBIOL INST

ASMIR

MINERAL RAW MATL RES INS

MINER

PRIORITY-DATA: 1988SU-4628674 (December 30, 1988)

PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

SU 1604843 A

November 7, 1990

000

APPLICATION-DATA:

PUB-NO

APPL-DATE

APPL-NO

DESCRIPTOR

SU 1604843A

December 30, 1988

1988SU-4628674

INT-CL (IPC): C12N 1/14; C12R 1/68; C22B 3/00

ABSTRACTED-PUB-NO: SU 1604843A

BASIC-ABSTRACT:

Feldspar is produced from alumino-silicates more efficiently by treating the material with culture liq. of Aspergillus niger, Rhizopus arrhizus or Penicillium chrysogenum, of pH 1.5-2.5, at solid:liq. ratio of 1:10-20, respectively, for 0.5-3 hours at 50-90 deg. C, with stirring. Subsequent magnetic sepn. yields the feldspar concentrate contg. 0.21-0.3% Fe oxides.

USE/ADVANTAGE - Yield of prod. contg. up to 0.3% Fe oxides is increased to 53-61%.  
Used in biotechnology, and it can be of use in prodn. of ceramics and glass.  
Bul.41/7.11.90

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: FELDSPAR PRODUCE ALUMINOSILICATE COMPRISE TREAT ACIDIC CULTURE  
ASPERGILLUS NIGER RHIZOPUS ARRHZUS PENICILLIUM CHRYSOGENUM STORAGE HEAT

DERWENT-CLASS: D16 L01 L02

CPI-CODES: D05-H; L02-G12;

**WEST****End of Result Set**☐ ☐ Generate Collection ☐ Print

L12: Entry 4 of 4

File: DWPI

DERWENT-ACC-NO: 1971-27096S  
DERWENT-WEEK: 197116  
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TITLE: Acid stable lactase

PATENT-ASSIGNEE:

ASSIGNEE

BAXTER LAB INC

CODE

BAXT

PRIORITY-DATA: 1969US-0812347 (April 1, 1969)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
FR 2042244 A			000	
CA 941771 A	February 12, 1974		000	
GB 1306751 A			000	
JP 74024234 B	June 21, 1974		000	
US 3620924 A			000	

INT-CL (IPC): C07G 7/00; C12D 13/00

ABSTRACTED-PUB-NO: FR 2042244A

BASIC-ABSTRACT:

Lactase, stable and active in acid medium is obtained by aerobic fermentation using Aspergillus niger. Product is extracted with water and adsorbed on to hydrate aluminium silicate (pref. bentonite or kaolin) at pH 3-6 (pref. 4). Silicate washed with acetone/water mixture contng. approx. 40-50% acetone and lactase liberated by adjusting pH to about 7-8 with aq. alkali (pref. NH<sub>3</sub>). Colour of lactase may be improved by treatment with Ca(OH)<sub>2</sub>. Used as food supplement for people deficient in natural lactase.

TITLE-TERMS: ACID STABILISED LACTASE

DERWENT-CLASS: D13 D16

CPI-CODES: D03-H01; D05-C03;

**WEST****End of Result Set**☐ ☐ Generate Collection ☐ Print

L3: Entry 2 of 2

File: DWPI

Sep 2, 1987

DERWENT-ACC-NO: 1988-021880  
DERWENT-WEEK: 198804  
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TITLE: Leaching chemically resistant metal silicate or oxide - with fermentation broth  
obtd. by culturing thiobacillus or ferrobacillus on an oxidn. substrate contg. sulphur

INVENTOR: BECKER, S; BULLMANN, M ; DIETZE, H J ; ISKE, U

## PATENT-ASSIGNEE:

ASSIGNEE

CODE

AKAD WISSENSCHAFTEN DDR

DEAK

PRIORITY-DATA: 1985DD-0274868 (April 4, 1985)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DD 249155 A	September 2, 1987		004	

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
DD 249155A	April 4, 1985	1985DD-0274868	

INT-CL (IPC): C22B 3/00; C22B 59/00; C22B 60/02

ABSTRACTED-PUB-NO: DD 249155A

## BASIC-ABSTRACT:

In the microbial decomposition of chemically resistant silicate and/or oxidic raw materials contg. metals, e.g. sand or heavy soaps, or of mineral concentrates obtainable from these, e.g. zircon, garnet, ilmenite, hornblende, magnetite, rutile, monazite and disthene, or of difficultly decomposable technical waste and by-prods., using an aq. microbially produced leach soln. contg. active leach components, a fermentation soln. contg. H<sub>2</sub>SO<sub>4</sub>, obtd. by using a strain of Thiobacillus and/or Ferrobacillus and an oxidn. substrate contg. S, is contacted with the material to be leached, either during the phase of H<sub>2</sub>SO<sub>4</sub> formation or in an external cycle.

ADVANTAGE - Raw materials with little geochemical mobility of the metal components, and stable crystal structure, can be treated. Valuable metals can be obtd. easily and cheaply from the leached material.

CHOSEN DRAWING: Dwg.0/0

TITLE-TERMS: LEACH CHEMICAL RESISTANCE METAL SILICATE OXIDE FERMENTATION BROTH OBTAIN CULTURE THIOBACILLUS FERROBACILLUS OXIDATION SUBSTRATE CONTAIN SULPHUR

DERWENT-CLASS: D16 K05 M25

CPI-CODES: D05-A04; M25-B;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1678U; 1680U ; 1714U ; 1729U ; 1753U ; 1786U ;  
1905U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1988-009694

**WEST**

Generate Collection

Print

L3: Entry 1 of 2

File: DWPI

Feb 28, 1991

DERWENT-ACC-NO: 1991-215984  
DERWENT-WEEK: 199130  
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TITLE: Microbial breakdown of nickel hydro:silicate - comprising leaching with acid  
aq. medium contg. Thiobacillus ferrooxidans

INVENTOR: GOLDBACH, E; GROTSCHER, B ; HANSEL, R ; POLLMER, K ; VOLAND, B

PATENT-ASSIGNEE:

ASSIGNEE

BERGAKAD FREIBERG

CODE

FREIN

PRIORITY-DATA: 1989DD-0330980 (July 20, 1989)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DD 287532 A	February 28, 1991		000	

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
DD 287532A	July 20, 1989	1989DD-0330980	

INT-CL (IPC): C22B 3/18

ABSTRACTED-PUB-NO: DD 287532A

BASIC-ABSTRACT:

In microbial breakdown of Ni hydrosilicates, the hydrosilicate is leached with solns., at pH 0.5-2, contg. Thiobacillus ferrooxidans grown in a medium contg. H2SO4 and Fe(II), and sepd. from this in its growing phase. The leaching soln. contains T. ferrooxidans which has multiplied in 9K medium and has been sepd. from this in its growth phase. The leaching soln. may be tank, batch, dump or in situ leaching. The soln. may be circulated.

USE/ADVANTAGE - The process is esp. for treatment of Ni hydrosilicates with Ni in serpentine binding and in amt. less than 1%. The range of raw materials for Ni recovery is widened. 80-98% Solubilisation of Ni is achieved in 7-20 days.

CHOSEN-DRAWING: Dwg.0/-

TITLE-TERMS: MICROBE BREAKDOWN NICKEL HYDRO SILICATE COMPRISE LEACH ACID AQUEOUS MEDIUM CONTAIN THIOBACILLUS FERROOXIDANS

DERWENT-CLASS: D16 M25

CPI-CODES: D04-A01J; D04-B05; M25-B; M25-G19;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1991-093788

**WEST**☐ Generate Collection☐ Print

L2: Entry 6 of 7

File: DWPI

DERWENT-ACC-NO: 1973-15438U  
DERWENT-WEEK: 197311  
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TITLE: Treating lactase deficiency - with an active lactase from aspergillus niger

## PATENT-ASSIGNEE:

ASSIGNEE

CODE

BAXTER LAB INC

BAXT

PRIORITY-DATA: 1971US-0153423 (June 15, 1971), 1969US-0812348 (April 1, 1969)

## PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

US 3718739 A

000

INT-CL (IPC): A61K 19/00

ABSTRACTED-PUB-NO: US 3718739A  
BASIC-ABSTRACT:

Lactase deficiency in mammals is treated by oral administration of an amt. of lactase enzyme sufficient to hydrolyse the undigested lactose normally present in the mammal. The lactase enzyme is an acid-active, acid-stable lactase enzyme prepn. prepd. from growth products of a culture of Aspergillus niger by absorption with hydrated aluminium silicate at pH 3-6, followed by release of the enzyme prepn. by adjustment to pH 7-8. The enzyme prepn. is stable at pH 2-9 with at least 90% of its activity at pH 2.5-5.0 and at 37 degrees C and contg. at least 50,000 Lactase Units per g. of enzyme prepn.

TITLE-TERMS: TREAT LACTASE DEFICIENT ACTIVE LACTASE ASPERGILLUS NIGER

DERWENT-CLASS: B04 D16

CPI-CODES: B04-B02C; B12-L09; D05-C03;

CHEMICAL-CODES:

Chemical Indexing M1 \*01\*

Fragmentation Code

V800 N130 N160 M720 M781 R002 M423 M902

## 4502 1:35 PM

L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS  
AB Al<sub>2</sub>O<sub>3</sub> was recovered from clays contg. Al<sub>2</sub>O<sub>3</sub> 33.8-36.1, SiO<sub>2</sub> 46.2-50.1, Fe<sub>2</sub>O<sub>3</sub> 0.8-6.3%, and others by leaching with heterotropic acid-producing bacteria in glucose soln. and fungi. Best results were achieved by using a strain of **Aspergillus niger**, which formed oxalic and **citric** acids as metabolic products in **clay** pulp with molasses. The Al recovery was >90% after activating the **clay** at 60.degree. for 1-2 h and leaching at 90.degree. and pH 0.5 for 3-6 h. Al(OH)<sub>3</sub> or AlCl<sub>3</sub>.6H<sub>2</sub>O were pptd. from the pregnant soln. and Al<sub>2</sub>O<sub>3</sub> was prepd. by calcining.

ACCESSION NUMBER: 1986:409777 CAPLUS  
DOCUMENT NUMBER: 105:9777  
TITLE: Biological leaching of aluminum from clays  
AUTHOR(S): Grudev, S.; Grudeva, V.  
CORPORATE SOURCE: Dep. Miner. Process., Higher Inst. Min. Geol., Sofia, 11561, Bulg.  
SOURCE: Biotechnol. Bioeng. Symp. (1986), 16(Biotechnol. Min. Met.-Refin. Fossil Fuel Process. Ind.), 91-9  
CODEN: BIBSBR; ISSN: 0572-6565  
DOCUMENT TYPE: Journal  
LANGUAGE: English



L8 ANSWER 15 OF 32 CAPLUS COPYRIGHT 2002 ACS

AB A microorganism substrate is adjusted to weakly alk. pH and mixed with .gtoreq.1 of cellulose decomp. bacteria, filamentous fungus, nitrobacter, nodule bacteria, rhizobium, **thiobacillus**, actinomycetaceae, yeast, and pseudomonas to prep. a waste deodorizing agent. The substrate contains .gtoreq.1 of crushed rock. **bentonite**, siliceous white clay, pitchstone, and coals. Thus, Aspergillus oryzae, Nitrosomonas europaea, Nitrobacter agile, **Thiobacillus** thioparus, **Thiobacillus** thiooxidans, Pseudomonas ruhlandii, and Saccharomonospora virides were mixed with charred rice hull and white clay to prep. a deodorizing agent for night soil, wastes, sewage treatment plant etc.

ACCESSION NUMBER: 1984:459658 CAPLUS  
DOCUMENT NUMBER: 101:59658  
TITLE: Agents for dedorization of wastes  
PATENT ASSIGNEE(S): Monma, Yoshimichi, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 2 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 59022555	A2	19840204	JP 1982-132020	19820730

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS  
 AN 1990:59791 CAPLUS  
 DN 112:59791  
 TI The formation of a mixed-layer serpentine-**smectite** structure in  
 kimberlite under the effects of **Thiobacillus** thiooxidans  
 AU Platonova, N. P.; Eroshchev-Shak, V. A.; Lebedeva, E. V.; Karavaiko, G. I.  
 CS Inst. Mikrobiol., Moscow, USSR  
 SO Mikrobiologiya (1989), 58(2), 271-5  
 CODEN: MIKBA5; ISSN: 0026-3656  
 DT Journal  
 LA Russian  
 CC 53-1 (Mineralogical and Geological Chemistry)  
 AB The oxidn. of S by **Thiobacillus** thiooxidans at low pH in the  
 presence of ground kimberlite (0.25 mm particle size) intensified rock  
 decompn., esp. serpentinization. Decompn. occurred with active removal of  
 Mg from the rock and the formation of serpentine with **smectite**  
 interlayers. The 2:1 **smectite** has Ca, K, and Na as exchangeable  
 cations. The possible role of bacteria in the weathering of Yakutian  
 kimberlites is discussed.  
 ST **smectite** interstratification serpentine kimberlite decompn;  
**thiobacillus** thiooxidans kimberlite serpentinization  
 IT Kimberlite  
 RL: RCT (Reactant)  
 (decompn. of, in presence of **Thiobacillus** thiooxidans)  
 IT Serpentine-group minerals  
 RL: PRP (Properties)  
 (interstratification compds., with **smectite**, formation of,  
 from kimberlite decompn. in presence of **Thiobacillus**  
 thiooxidans)  
 IT **Thiobacillus** thiooxidans  
 (kimberlite decompn. in presence of, mixed-layer serpentine-  
**smectite** from)  
 IT **Smectite**-group minerals  
 RL: PRP (Properties)  
 (interstratification compds., with serpentine, from kimberlite decompn.  
 in presence of **Thiobacillus** thiooxidans)

(FILE 'HOME' ENTERED AT 10:47:15 ON 30 JUL 2002)

FILE 'CAPLUS' ENTERED AT 10:51:18 ON 30 JUL 2002

L1 1 S CLAY (P) ASPERGILLIS NIGER  
L2 50 S CLAY (P) ASPERGILLUS NIGER  
L3 6 S CLAY (P) ASPERGILLUS NIGER (P) CITRIC  
L4 0 S CLAY (P) ASPERGILLUS NIGER AND GROUDEV  
L5 0 S (CLAY (P) ASPERGILLUS NIGER) AND GROUDEV  
L6 2 S (CLAY (P) ASPERGILLUS NIGER) AND (THIOBACILLUS)  
L7 2 S SMECTITE (P) (ASPERGILLUS NIGER OR THIOBACILLUS)  
L8 32 S (PALYGORSKITE OR BENTONITE) (P) (ASPERGILLUS NIGER OR THIOBACI  
L9 593878 S ACIVATED OR ACTIVATION  
L10 1 S L8 AND L9  
L11 31515 S DECOLOR?  
L12 0 S L11 AND L8  
L13 67348 S ACTIVATING  
L14 0 S L13 AND L8

**Set Name Query**  
side by side

**Hit Count Set Name**  
result set

*DB=DWPI; PLUR=YES; OP=ADJ*

L12 silicate same aspergillus same (clay or bentonite or montmorillonite)

4 L12

*DB=USPT; PLUR=YES; OP=ADJ*

L11 silicate same microorganism same (clay or bentonite or montmorillonite)thiobacillus

0 L11

*DB=DWPI; PLUR=YES; OP=ADJ*

L10 silicate same microorganism same (clay or bentonite or montmorillonite)thiobacillus

0 L10

L9 silicate same (bacteria or fungi) same (clay or bentonite or montmorillonite)thiobacillus

0 L9

L8 silicate same thiobacillus same (clay or bentonite or montmorillonite)thiobacillus

0 L8

L7 silicate same aspergillus same (clay or bentonite or montmorillonite)thiobacillus

0 L7

L6 silicate same aspergillus (clay or bentonite or montmorillonite)thiobacillus

0 L6

L5 silicate with aspergillus (clay or bentonite or montmorillonite)thiobacillus

0 L5

L4 silicate with thiobacillus and (clay or bentonite or montmorillonite)

0 L4

L3 silicate with thiobacillus

2 L3

L2 silicate with aspergillus

7 L2

L1 silicate with (microbe or microorganism or microbe or bacteria or bacteriaum or fungi)

174 L1

END OF SEARCH HISTORY